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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
| 09/868,141 | 06/15/2001 | Shuji Takana | 1422-0480P | 6016 |
| 2292 7590 09/10/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747 | | | EXAMINER DOUYON, LORNA M | |
| | | | ART UNIT 1751 | PAPER NUMBER |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

| | | | |
|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 09/868,141 | Applicant(s) TAKANA ET AL. | |
| | Examiner Lorna M. Douyon | Art Unit 1751 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8 and 16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8 and 16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on July 23, 2007 has been entered.
2. Claims 1-6, 8 and 16 pending.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-6, 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atkinson et al. (US Patent No. 4,900,466), hereinafter "Atkinson".

Atkinson teaches powders prepared by spray drying and suitable for use as detergent powders or components thereof and contain sodium carbonate and/or sodium carbonate/sodium sulphate double salt Burkeite modified with a low level of an organic polycarboxylate (see abstract). Atkinson also teaches a process for the production of a powder suitable for use as a granular detergent composition or a component thereof, which comprises the steps of (i)

Art Unit: 1751

preparing an aqueous slurry comprising sodium carbonate, and optionally also comprising sodium sulphate, an effective amount of a crystal growth modifier which is an organic material having at least three carboxyl groups in the molecule; and optionally one or more anionic and/or nonionic detergent active compounds, (ii) drying to form a powder; (iii) optionally incorporating into the dried powder one or more detergent components in liquid form and or mixing the dried powder with one or more solid detergent components (underlinings supplied; see col. 2, line 67 to col. 3, line 27). The spray-dried powder of step (ii) may be a predominantly inorganic carrier intended specially as a vehicle for the nonionic surfactant, and may perhaps form only a minor part of the final product, and in step (iii) it will then be mixed with the main product, which might itself have been spray-dried in a separate operation (see col. 6, lines 62-68). The adjunct will be prepared by spraying liquid or liquefied nonionic surfactant onto a spray-dried carrier material according to the invention, and the adjunct is then postdosed to a base powder containing anionic surfactant, possibly nonionic surfactant and builders prepared in a separate spray-drying operation and that the adjunct, may, for example, contain from 5 to 40% by weight of nonionic surfactant and from 60 to 95% by weight of crystal-growth-modified inorganic salts and that the adjunct may, for example, constitute from 5 to 20% by weight of the final powder (underlinings supplied, see col. 9, lines 51-62). In Example 11, Atkinson teaches a spray-dried crystal-growth-modified Burkeite and comprising 65.5 wt% sodium sulphate (MW=142), 24.5 wt% sodium carbonate (MW=106), 2.0 wt% sodium polyacrylate (molecular weight 25,000), 4.5 wt% sodium silicate (MW=122) and 1.5 wt% total surfactant (see col. 13, line 58 to col. 14, line 20), wherein the molar ratio of sodium sulphate ($65.5/142=0.46$) + sodium polyacrylate ($2.0/25,000=0.00008$) + sodium silicate ($4.5/122=0.037$) to sodium carbonate ($24.5/106=0.23$) is

Art Unit: 1751

about 7:3. This spray dried carrier is equivalent to the detergent additive particles (a) of the present claims. This material was suitable for addition to a phosphate-built or aluminosilicate built detergent powder in Example 24 and 25 (see col. 14, lines 16-20). In each of Examples 24 and 25, 10.0 wt% of the carrier of Example 11 was incorporated into a spray-dried base powder comprising at least 10% by weight total surfactants wherein the final powder has a bulk density of 500g/l and 540 g/l, respectively (see col. 19, line 8 to col. 20, line 35), the spray-dried base powder being equivalent to the detergent particles (b) of the present claims. The spray dried carrier material, that is the crystal-growth-modified Burkeite, may form a major or minor part of the product (see col. 8, lines 10-13). Atkinson, however, fails to disclose the dissolution rate, microporous capacity, capability of releasing a bubble and a localized structure of the spray dried carrier material as those recited, the bulk density and particle size of the carrier material, the bulk density, particle size of the spray-dried base powder, and a carrier material containing less than 6% by weight of a surfactant.

It would have been obvious to one of ordinary skill in the art at the time the invention was made reasonably expect the spray dried carrier material of Atkinson, as in Example 11, to have a bulk density, particle size, dissolution rate, microporous capacity, capability of releasing a bubble and a localized structure within those recited; and the base powders, as in Examples 24 and 25, to have a bulk density and particle size as those recited because similar compositions, similar ingredients and the same spray-drying process have been utilized. In addition, the final product, which was a blend of the spray-dried carrier material and spray-dried base powder, has a bulk density of about 500 g/l, hence each of the spray-dried carrier material and spray-dried

Art Unit: 1751

powder, prior to blending should also have the same bulk density, particle size and properties as those recited.

With respect to the amount of surfactant in the carrier material, it would have been obvious to one of ordinary skill in the art at the time the invention was made to select the portion of the prior art's range which is within the range of applicant's claims because it has been held to be obvious to select a value in a known range by optimization for the best results. As to optimization results, a patent will not be granted based upon the optimization of result effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the *prima facie* case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). In addition, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges disclosed by the prior art", see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976; *In re Woodruff*, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990). See MPEP 2131.03 and MPEP 2144.05I.

Response to Applicants' Arguments

5. Applicants' arguments filed July 23, 2007 have been fully considered but they are not persuasive.

With respect to the rejection based upon Atkinson, Applicants again argue that Atkinson discloses at column 22, lines 12-19 a detergent composition containing the adjunct of Example 30 and the base powder of Example 24 at a specific ratio, and the adjunct of Example 30

Art Unit: 1751

corresponds to the detergent additive particles (a) of the present invention, and contains liquid non-ionic surfactant in the amount of 23% by weight which falls outside of the range recited in applicants' claimed invention (less than 6% by weight), and for this reason, Atkinson fails to suggest the claimed invention.

The Examiner respectfully disagrees with the above argument because a reference is not limited to the working examples, *see In re Fracalossi*, 215 USPQ 569 (CCPA 1982). All disclosures of the prior art, including non-preferred embodiment, must be considered. *See In re Lamberti and Konort*, 192 USPQ 278 (CCPA 1967). Also, non-preferred embodiments can be indicative of obviousness, *see Merck & Co. v. Biocraft Laboratories Inc.* 10 USPQ 2d 1843 (Fed. Cir. 1989); *In re Lumberti*, 192 USPQ 278 (CCPA 1976); *In re Kohler*, 177 USPQ 399. As stated in the previous office action, in col. 9, lines 51-62, Atkinson teaches that an adjunct will be prepared by spraying liquid or liquefied nonionic surfactant onto a spray-dried carrier material according to the invention, and the adjunct is then postdosed to a base powder containing anionic surfactant, possibly nonionic surfactant and builders prepared in a separate spray-drying operation and that the adjunct, may, for example, contain from 5 to 40% by weight of nonionic surfactant and from 60 to 95% by weight of crystal-growth-modified inorganic salts and that the adjunct may, for example, constitute from 5 to 20% by weight of the final powder. In addition, in col. 3, lines 1-23, the incorporation of one or more detergent components in liquid form (i.e. nonionic surfactant) into the spray dried powder (i.e. adjunct, which is equivalent to detergent particles (a)) is only optional". Hence, the minimum content of nonionic surfactant in the adjunct of Atkinson, which is equivalent to the "detergent additive particles (a)" of the present invention overlaps with "less than 6% by weight of a surfactant" required in the "detergent additive particles (a)" of the present invention. Hence, a *prima facie* case of obviousness exists because the claimed ranges "overlap or lie inside ranges

disclosed by the prior art”, see *In re Wertheim*, 541 F.2d 257, 191 USPQ 90 (CCPA 1976; *In re Woodruff*, 919 F.2d 1575, 16USPQ2d 1934 (Fed. Cir. 1990). See also MPEP 2131.03 and MPEP 2144.05I.

Applicants also argue that superior effects of the present invention are amply demonstrated by Applicants’ Examples and Comparative Examples, and that Comparative Particles 1 and 2 at Table 1 correspond to the adjunct of Atkinson which contains liquid non-ionic surfactant in the amount of 23% by weight which falls well outside of the claimed range of less than 6% by weight. Applicants also argue that the results of the table entitled “Detergent Additive Particles or Comparative Particles/Detergent Particles = 30/70 (weight ratio)” at Table 3 (pages 63-64 of the specification) demonstrate the effect upon the “Remaining Ratio” value which is an index for evaluating distributivity from the dispenser based on the amount of surfactant present, and the table confirms that the “Remaining Ratio” of the Comparative Examples containing Comparative Particles 1 and 2 corresponding to Atkinson (page 64 of specification) are very undesirable in comparison with the Remaining Ratio of the Examples directed to Additive Particles at the bottom of page 63. Applicants also argue that the above-discussed comparative data is believed to overcome any *prima facie* case of obviousness believed presented by the Examiner, as applicants have clearly demonstrated that the presence of amounts of surfactant in the amount taught by the reference fails to enable the desired results to be achieved.

As stated in the previous office action, the showing on pages 43-65 of the present application, in particular, the Examples and Comparative Particles 1 and 2 at Table 1 has been carefully considered. The showing, however, is not commensurate in scope with the claims. The

Art Unit: 1751

showing is only true for detergent additive particles (a) comprising at least the following ingredients: sodium carbonate, sodium sulfate, and sodium polyacrylate, and not the generic “inorganic water-soluble salt which may be an ammonium or amine salt, and not an alternative carbonate or sulfate group, but a combination of the two. In addition, the showing is not compared with the closest prior art, i.e. to Atkinson because in Atkinson, the surfactant used is a nonionic surfactant whereas in the comparative particles in Table 1 the surfactants used are anionic surfactants. In addition, the present claims do not require a “Remaining Ratio” value.

Applicants also argue that the claims as amended now recite a ratio of detergent additives particles (a)/detergent particles (b) of 10/80 -35/65, and as such, the exemplified ratio of 30/70 falls within the claimed invention, while the other exemplified ratios do not.

The Examiner respectfully disagrees with the above argument because of the same reasons as above. In addition, Atkinson teaches that the adjunct (which is equivalent to detergent additive particles (a) may, for example, constitute from 5 to 20% by weight of the final powder (see col. 9, lines 51-62). The remainder would then constitute at least the spray dried base powder which corresponds to detergent particles (b). In Example 24, the spray dried base powder is present in the overall composition in amounts of 70.4 wt% (see col. 19, line 34).

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lorna M. Douyon whose telephone number is 571-272-1313.

The examiner can normally be reached on Mondays-Fridays 8:00AM-4:30PM.

Art Unit: 1751

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on 571-272-1029. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Lorna M. Douyon/
Primary Examiner
Art Unit 1751